# 32. An x-ray system comprising:

a patient table having a top extending in a head-feet direction and left and right sides; an x-ray source selectively producing a beam of x-rays;

an x-ray receptor producing x-ray images electronically in response to an impinging twodimensional distribution of x-ray intensities within said beam of x-rays; and

an articulated structure supporting the x-ray receptor, but not the x-ray source, for selective movement relative to the patient table top between positions including each of a position under the patient table top for through-table x-ray imaging with the x-ray source above the table top, a position at the left side of the patient table and transverse to and generally above the patient table top for cross-table x-ray imaging with the x-ray source generally above and at the right side of the patient table, and a position at the right side and transverse to the patient table top for cross-table imaging with the x-ray source generally above and at the left side of the patient table; wherein each of said positions of the x-ray receptor transverse to the patient table top and at

wherein each of said positions of the x-ray receptor transverse to the patient table top and at the left and right sides of the patient table for cross-table x-ray imaging includes a position in which the x-ray receptor is selectively in a position substantially parallel to the length of the patient table top for cross-table lateral x-ray imaging and a position in which the x-ray receptor is angled to the length of the patient table for cross-table oblique x-ray imaging:

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions.

51. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;

a patient table for supporting a patient between the source and receptor, said table having a length and a width; and

an articulated structure supporting the x-ray receptor, but not an x-ray source, for selective

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comprising at least a position for through-table imaging with the receptor under the table, a position for cross-table lateral imaging with the receptor at least at one side and generally above and along the length of the table, and a position for cross-table oblique imaging with the receptor at least at one side of the table and generally above and angled relative to the length of the table; and

supports for the table and articulated structure;

wherein said articulated structure is supported at a mounting location not required to change relative to the patient table for movement of the x-ray receptor to each of said positions.

53. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;

a patient table for supporting a patient between the source and receptor, said table having a length and a width; and

an articulated structure supporting the x-ray receptor for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position for through-table imaging with the receptor under the table, a position for cross-table imaging with the receptor at least at one side and generally above to the table and extending along a direction non-normal to the length of the table, and a position for imaging of a seated patient or the knees of a standing patient with the receptor at least at one side of the table and generally below the table; and

supports for the table and articulated structure;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions.



- 56. A system as in claim 53 in which said position for cross-table imaging includes a position for cross-table imaging at each side of the table.
- 57. A system for positioning an x-ray receptor for diagnostic protocols comprising:
  - an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon:
  - a patient table for supporting a patient between the source and receptor, said table having a length and a width; and
  - an articulated structure supporting the x-ray receptor, but not an x-ray source, for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position for through-table imaging with the receptor under the table, a position for cross-table imaging with the receptor at least at one side and generally above the table and extending in a direction non-normal to the length of the table, and a position for imaging of a patient with the receptor at least at one side of the table and generally above the table and extending away from the table in a direction substantially normal to the length of the table; and

supports for the table and articulated structure;

- said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions.
- 61. A system for positioning an x-ray receptor for diagnostic protocols comprising:
  - an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;
  - a patient table for supporting a patient between the source and receptor, said table having a length and a width; and
  - an articulated structure supporting the x-ray receptor, but not an x-ray source, for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position for through-table imaging with the receptor under the



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and extending away from the table, and a position with the receptor at least at one side and generally above to the table and extending away from the table, and a position with the receptor at least at one side of and generally below the table; and

supports for the table and articulated structure;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions.

62. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;

a patient table for supporting a patient between the source and receptor, said table having a length and sides spaced in a direction transverse to the table length; and

an articulated structure supported by the table and supporting the x-ray receptor for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position for cross-table imaging with the receptor being selectively at each side of the table;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions; and a support for the table.

64. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon:

a patient table for supporting a patient between the source and receptor, said table having a length and sides spaced from each other in a width direction; and

an articulated structure supported by the table and supporting the x-ray receptor for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a first position for cross-table imaging with the receptor at least



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at one side of the table and extending in a direction non-normal to the length of the table, and a second position for imaging with the receptor at least at one side of the table and extending in a direction away from the table and normal to the length of the table;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions; and

a support for the table;

wherein at least one of said first and second positions selectively includes a position at each side of the table.

68. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;

a patient table for supporting a patient between the source and receptor, said table having a length and a width; and

an articulated structure supported by the table and supporting the x-ray receptor for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position for cross-table imaging with the receptor at least at one side of and generally above the table and extending in a direction non-normal to the length of the table, and a position for imaging with the receptor at least at one side of the table and generally below the table;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions; and a support for the table.

73. A system for positioning an x-ray receptor for diagnostic protocols comprising:

an x-ray receptor producing x-ray images electronically in response to x-rays impinging thereon;



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a patient table for supporting a patient between the source and receptor, said table having a length and a width; and

an articulated structure supported by the table and supporting the x-ray receptor for selective motion relative to the table to respective positions for a plurality of x-ray protocols comprising at least a position with the receptor at least at one side and generally above to the table and extending away from the table in a direction normal to the length of the table, and a position for imaging with the receptor at least at one side of the table and generally below the table;

said articulated structure being supported at a mounting location not required to change for movement of said x-ray receptor to each of said positions; and a support for the table.

76. A method of x-ray imaging with a filmless x-ray receptor producing x-ray images electronically comprising:

providing an x-ray source selectively emitting a beam of x-rays, a filmless x-ray receptor for producing x-ray imaged electronically, and a patient table top for supporting a patient between the source and receptor;

moving the x-ray source and an articulated structure supporting the x-ray receptor, but not the source, between the following positions of the receptor and corresponding positions of the source in which the x-ray beam is directed at the receptor: a position under the table top for through-table imaging, a position at the left side of the table top, and a position at the right side of the table top;

wherein each of said positions at the left and at the right side of the patient table top includes

a position in which the x-ray receptor is substantially along the patient table top and

a position in which the x-ray receptor is transverse to the patient table top;

wherein when in said position transverse to the patient table top, the x-ray receptor is selectively in each of a position generally above the patient table top and a position generally below the patient table top;

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wherein when in said position generally above the patient table top, the receptor is

selectively in each of a position substantially parallel to the length of the patient
table top, a position substantially normal to the length of the patient table top, and a

position angled to the length of the patient table top; and

wherein said articulated structure is supported at a mounting location not required to change for movement of the x-ray receptor to each of said positions.

77. A method of x-ray imaging with an x-ray receptor producing x-ray images electronically comprising:

providing an x-ray source selectively emitting a beam of x-rays, an x-ray receptor selectively producing x-ray imaged electronically, and a patient table top supporting a patient between the source and receptor;

moving the x-ray source and an articulated structure supporting the x-ray receptor, but not the source, between a position under the table top for through-table imaging in which the x-ray source is above the patient, a position at the left side of the table top in which the x-ray source is to the right of the patient, and a position at the right side of the table top in which the x-ray source is to the left of the patient;

wherein in each of said positions the x-ray source is centered on the receptor to direct the x-ray beam at the x-ray receptor for imaging the patient with x-rays; and wherein said articulated structure is supported at a mounting location not required to change for movement of the x-ray receptor to each of said positions.

A method as in claim 77 comprising manually moving the receptor between said positions thereof while said articulated structure supports the receptor.

